

AMENDMENTS TO THE CLAIMS

Claims 1-8. (Canceled)

9. (Currently Amended) A heterojunction bipolar transistor comprising:

- a semiconductor substrate of a first conductivity type including a collector region;
- a base region formed on said substrate including a first base region doped with a non-dopant having a first concentration and a second base region doped with said non-dopant having a second concentration;
- an emitter region formed over said base region including a first ~~emitter polysilicon~~ layer in-situ doped with a dopant having a first concentration and a second ~~emitter polysilicon~~ layer in-situ doped with said dopant having a second concentration; and
- an emitter-base junction region formed by out-diffusion of said dopant from at least one of said first and second ~~emitter polysilicon~~ layers.

10. (Original) The heterojunction bipolar transistor of claim 9, wherein said base region comprises SiGe.

11. (Currently Amended) The heterojunction bipolar transistor of claim 9, wherein said first base region and said first ~~emitter polysilicon~~ layer are formed closer to said emitter-base junction region than said second base region and said second ~~emitter polysilicon~~ layer.

12. (Original) The heterojunction bipolar transistor of claim 9, wherein said non-dopant comprises carbon.

13. (Previously Presented) The heterojunction bipolar transistor of claim 12, wherein said first carbon concentration is from about $8 \times 10^{18} \text{ cm}^{-3}$ to about $5 \times 10^{19} \text{ cm}^{-3}$, and said second carbon

concentration is from about $1.5 \times 10^{19} \text{ cm}^{-3}$ to about $7 \times 10^{19} \text{ cm}^{-3}$.

14. (Original) The heterojunction bipolar transistor of claim 9, wherein said dopant comprises arsenic.

15. (Original) The heterojunction bipolar transistor of claim 14, wherein said first arsenic concentration is from about $5 \times 10^{19} \text{ cm}^{-3}$ to about $3 \times 10^{20} \text{ cm}^{-3}$, and said second arsenic concentration is from about $1 \times 10^{20} \text{ cm}^{-3}$ to about $7 \times 10^{20} \text{ cm}^{-3}$.

Claims 16-22.